



## CDM for Small Renewable Energy Development

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In partnership:



## CDM for Small Renewable Energy Development

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# Small Renewable Energy

**Size limit:** renewable energy project activities with a maximum output capacity equivalent to up to 15 megawatts (or an appropriate equivalent);

**Definition of .maximum output (EB 61 Report, Annex 21):**

- Output is the installed/rated capacity as indicated by the manufacturer of the equipment or plant, disregarding the actual load factor of the plant;
- For thermal applications/project activities using biomass, biofuel, biogas, the maximum output limit is 45 MWth
- For solar thermal, the size limit is .maximum output. shall be calculated using a conversion factor of 700 Wth/m<sup>2</sup> of aperture area of glazed flat plate or evacuated tubular collector i.e. eligibility limit in terms of aperture area is 64000 m<sup>2</sup> of the collector.



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## EB 67 – Positive list of RE project eligible for automatic additionality

**Two conditions:**

1. Grid-connected **and off grid renewable electricity generation** technologies
  - (i) Solar technologies (photovoltaic and solar thermal electricity generation);
  - (ii) Off-shore wind technologies;
  - (iii) Marine technologies (wave, tidal).
2. Projects for isolated units of very small size in distributed location for end users that are households or communities or SMEs and where the capacity of each unit is no larger than [5%] [1%] of small-scale CDM thresholds



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# Renewable Energy in CDM Implementation

Renewable Energy Projects as share of all CDM projects published at the UNFCCC website for public comments and still in the pipeline (not withdrawn or rejected) are renewable energy projects;

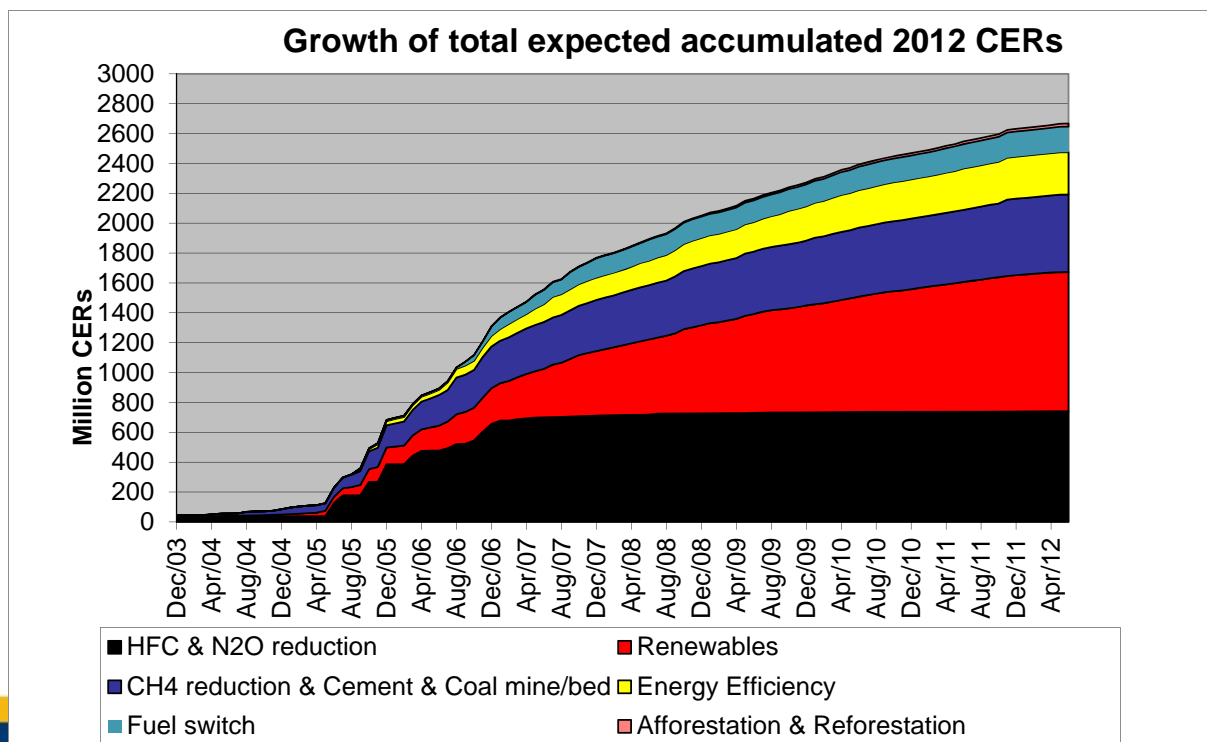
- 68% of the number of CDM projects
- 35% of the total expected CERs by the end of 2012
- 20% of the issued CERs

Among the 352 PoAs submitted, 149 are renewable energy PoA (42%)



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## Renewable energy is the project type that grows most over time



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## Small RE CDM projects

Type	Validation	Request registration	Registered	Total
Biomass energy	273	4	249	526
Geothermal	2	0	0	2
Hydro	415	10	662	1087
Solar	126	3	67	196
Wind	339	5	256	600
Total	1155	22	1234	2411

84% of all the small scale CDM projects are located in Asia and Pacific



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## Small Renewable Energy in CDM - methodologies

Methodology No.	No. of Projects	No. of PoAs
AMS-I.A. Electricity generation by the user	51	3
AMS-I.B. Mechanical energy for the user	4	2
AMS-I.C. Thermal energy production with or without electricity	605	59
AMS-I.D. Renewable electricity generation for a grid	2740	65
AMS-I.E. Switch from non-renewable biomass for thermal applications by the user	21	14
AMS-I.F. Renewable electricity generation for captive use and mini-grid	70	22
AMS-I.G. Plant oil production and use for energy generation in stationary applications		
AMS-I.H. Biodiesel production and use for energy generation in stationary applications		
AMS-I.I. Biogas/biomass thermal applications for households/small users		6
AMS-I.J. Solar water heating systems (SWH)		6
AMS-I.K. Solar cookers for households		
AMS-I.L. Electrification of rural communities using renewable energy		1



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# Main features of Small RE in CDM Implementation

- One major area of CDM implementation, with large number of projects concentrating in small number of methodologies
- Methodologies relatively simple, especially in terms of additionality (first of its kind, higher costs) and monitoring (usually metering energy output and supply/use)
- Give clean energy to population with no access to electricity
- High upfront investment requirements, low operation cost
- Except for hydro and geothermal, other types of renewable energy are intermittent, high requirements for grid match demand and supply
- A main solution for countries to reduce reliance on fossil fuel import
- High perceived sustainable benefits – can apply for Gold Standard



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## Thanks

Source of Data: UNEP Risoe Centre CDM Pipeline, 1 July 2012 version



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